

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent application of : Group Art Unit:
Scott W. Huffer, *et al.* : 1772

Serial No.: 09/778,334 : Examiner:
Filed: February 7, 2001 : Sandra M. Nolan

For: PACKAGING MATERIAL, METHOD OF MAKING : Attorney Docket No.:
IT, AND PACKAGE MADE THEREFROM : 9325-36 (148068)

DECLARATION OF SCOTT W. HUFFER
SUBMITTED PURSUANT TO 37 C.F.R. 1.132

I, Scott Huffer, hereby declare as follows:

1. I am a Research and Development Associate with the Packaging Development Center of Sonoco Products Co. of Hartsville, South Carolina ("Sonoco"). I have a B.S. in Chemical Engineering and seventeen years of experience in the printing and converting industry.
2. I understand that this declaration is to be submitted to the U.S. Patent Office as part of the response to the office action mailed on February 19, 2003.
3. Sonoco has produced a packaging material in accordance with this application. A sample of the packaging material is attached hereto as Exhibit "A".
4. The material includes an oriented polypropylene substrate, which is printed and coated with an electron beam curable coating on the outside surface. A cold seal cohesive is applied to the inside surface.
5. The electron beam curable coating includes oligomers and monomers that form a stable network when cured with an electron beam. The coating also includes a non-migratory slip agent. The slip agent is non-migratory because, during curing of the coating, it reacts into the oligomer/monomer network, thereby becoming fixed or "reacted-in".

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6. Generally speaking, slip agents are known in two forms, migratory and non-migratory. Migratory slip agents are commonly known in the field of converting. Migratory slip agents are selected for their incompatibility with the resin in which they are dispersed. Due to this incompatibility, the slip agents migrate to the surface of the structure, where they form a thin film. This process is known as blooming. The concentration of slip agents at the surface imparts a desired coefficient of friction to a laminate.

7. Non-migratory slip agents, while known, are not commonly utilized in the converting field. To the best of my knowledge, non-migratory slip agents have not been used in a coating for a packaging structure by anyone outside of Sonoco.

8. The inclusion of a non-migratory slip agent in the electron beam cured coating of the present invention imparts desirable properties to the coating that would not be exhibited in a coating having migratory slip agents because the non-migratory slip agent does not bloom. As exhibited by the attached sample, the coating of the present invention has very high gloss and an attractive appearance rivaling, if not exceeding, that of a laminated outer web. In addition, the non-migratory slip agent does not poison the cold seal cohesive or cause blocking when the packaging material is stored in rolls and the cold seal cohesive is in contact with the electron beam cured coating.

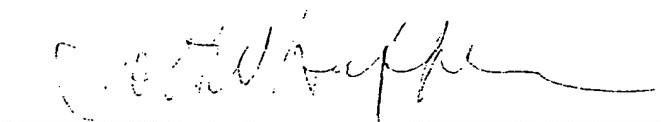
9. The properties exhibited by the electron beam cured coating of the present invention would not be expected of a coating having migratory slip agents. In fact, I have experimented with solvent-based coatings having migratory slip agents. The migratory slip agents bloomed out of the coating, concentrating at the surface. The concentration formed a haze and adversely affected the gloss of the coating. In addition, if the coated material had a cold seal cohesive coating on the opposite side, the migratory slip agents would have a tendency to poison the cold seal cohesive and cause it to block when the coated material is stored in a roll.

10. Those skilled in the art of converting understand that only non-migratory slip agents would become fixed during cross-linking of an electron-beam curable coating. Migratory slip agents would not become fixed during the cross-linking process. Rather, migratory slip agents, if used in an electron beam cured coating, would bloom out of the coating in the same manner as they do in a conventional solvent-based coating or resin.

11. The non-migratory slip agent in the electron beam cured coating of the present invention does not bloom. Therefore, the packaging material of the present invention can be stored in rolls, with the cold seal cohesive in contact with the electron beam cured coating, without poisoning the cold seal cohesive or blocking.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 4-7-03



Scott W. Huffer
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